





The Delta Science Program, the Ecosystem Restoration Program, and the Surface Water Ambient Monitoring Program
Jointly Present a Brown Bag Seminar Series.

## Assessing Extinction in Fishes: Preparing for Extinction of Delta Smelt

One of a series previewing the upcoming State of Bay-Delta Science 2016

Thursday, August 4<sup>th</sup> - Noon to 1:00
Park Tower Plaza - 2nd Floor Conf. Room - 980 Ninth St., Sacramento, CA



Peter Moyle, Ph.D.

UC Davis

Distinguished Professor Emeritus

of fish biology



## Jason Baumsteiger, Ph.D.

UC Davis

Postdoctoral Researcher
evolution and systematics of native fishes
Peter Moyle and Michael Miller labs

The extinction of a species is a major consideration in balancing water supply and environmental needs. It's usually regarded as a "yes/no" state. But, its determination can be quite complicated.

Drs. Moyle and Baumsteiger will discuss general aspects of assessing extinction, focusing on native fishes of the San Francisco Estuary including the Delta smelt. They will propose six extinction categories: mitigated, regional, native range, wild, visual, and global. To prevent premature delisting, they recommend a waiting period based on generation time rather than a fixed number of years.

They will offer brief presentations followed by an extended audience discussion.



Delta smelt

 The State of Bay-Delta Science 2016, coordinated by the Delta Stewardship Council, is a series of 15 publications that summarize our current scientific understanding of the Bay-Delta. It will include a report by Dr. Peter Moyle on Delta smelt.

## **Questions to Consider**

How do we define extinction? Is reliance on artificial selection synonymous to extinction?

How does our definition of extinction affect management strategies?

Should we use cultured fish to restore Delta smelt?

Are cultured Delta smelt populations still real Delta smelt? Or are they a lineage rapidly diverging from the original?